

# 6SG7

## Description and Rating

### PENTODE

#### GENERAL DESCRIPTION

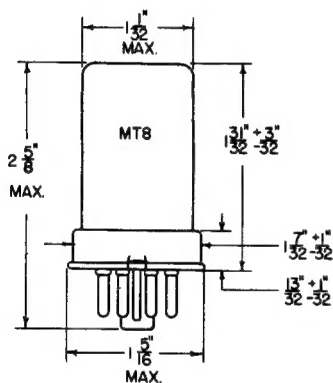
Principal Application: The 6SG7 is a remote-cutoff pentode designed for use as a high-gain radio- or intermediate-frequency amplifier. Features of the

Cathode . . . . . Coated Unipotential  
Heater Voltage (A-C or D-C) . . . . . 6.3 Volts  
Heater Current . . . . . 0.3 Ampere  
Envelope . . . . . MT-8, Metal Shell  
Base . . . . . B8-21, Small Wafer Octal 8-Pin

tube include high transconductance, low grid-plate capacitance, and a dual cathode connection to reduce undesired coupling between cathode circuits.

Mounting Position . . . . . Any  
Direct Interelectrode Capacitances: #  
Grid 1 to Plate (Max) . . . . . 0.003  $\mu\mu\text{f}$   
Input . . . . . 8.5  $\mu\mu\text{f}$   
Output . . . . . 7.0  $\mu\mu\text{f}$

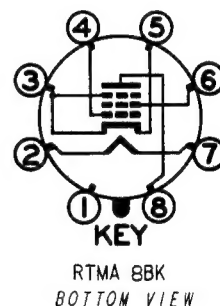
#### PHYSICAL DIMENSIONS



#### TERMINAL CONNECTIONS

Pin 1 - Shell and Internal Shield  
Pin 2 - Heater  
Pin 3 - Cathode and Grid  
                Number 3 (Suppressor)  
Pin 4 - Grid Number 1  
Pin 5 - Cathode  
Pin 6 - Grid Number 2 (Screen)  
Pin 7 - Heater  
Pin 8 - Plate

#### BASING DIAGRAM



#### DESIGN CENTER VALUES

Plate Voltage . . . . .	300	Volts
Screen Supply Voltage . . . . .	300	Volts
Screen Voltage . . . . .	200	Volts
Positive D-C Grid Number 1 Voltage . . . . .	0	Volts
Plate Dissipation . . . . .	3	Watts
Screen Dissipation . . . . .	0.6	Watt
Heater-Cathode Voltage . . . . .	90	Volts

#### MAXIMUM RATINGS

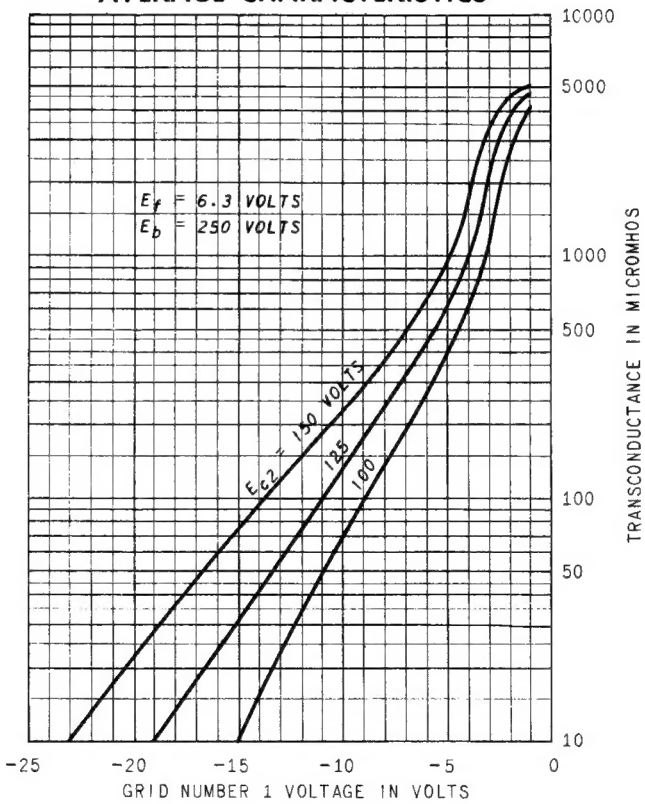
# Measured with pin 1 connected to pin 3

CHARACTERISTICS AND TYPICAL OPERATION

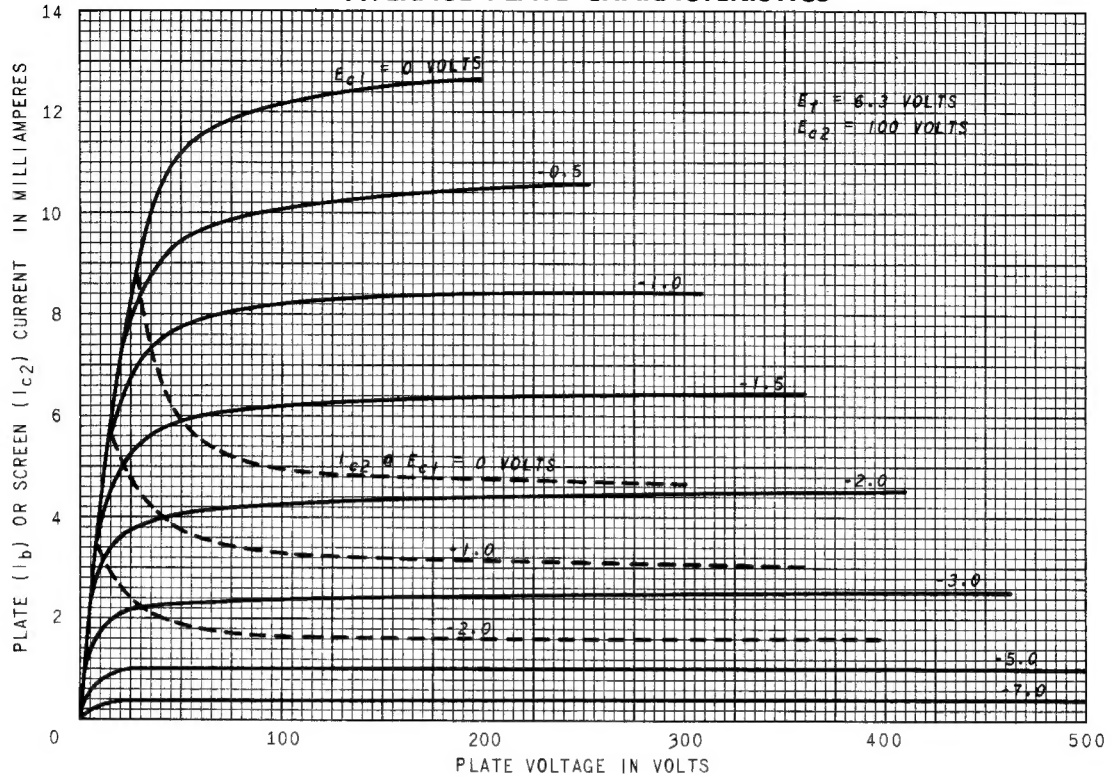
CLASS A<sub>1</sub> AMPLIFIER

Plate Voltage . . . . .	100	250	250	Volts
Screen Voltage . . . . .	100	125	150	Volts
Grid Number 1 Voltage . . . . .	-1	-1	-2.5	Volts
Plate Resistance (Approx) . . . . .	0.25	0.9	>1.0	Megohm
Transconductance . . . . .	4100	4700	4000	Micromhos
Plate Current . . . . .	8.2	11.8	9.2	Milliamperes
Screen Current . . . . .	3.2	4.4	3.4	Milliamperes
Grid Number 1 Voltage (Approx) for G <sub>m</sub> = 10 Micromhos . . . . .	-15	-19	-23	Volts

AVERAGE CHARACTERISTICS



### AVERAGE PLATE CHARACTERISTICS



### AVERAGE CHARACTERISTICS

